



## GGP **ENERGY** MEASURES

- Measure E1:** By July 2009, the Facilities Management Agency of Public Works will complete a study regarding the viability of processing Food Factory waste for biogas generation. If deemed viable, then by July 2011 Facilities Management will complete a study that identifies a time frame for implementation. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards implementation, and identifies overall program results.
- Measure E2:** By July 2008, the Facilities Management Agency of Public Works will prepare and implement a program whereby 100% of new county owned/managed facilities will meet LEED certification standards (the County will not seek the certification in an effort to conserve resources). Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards implementing the LEED certification standards program and identifies overall program results.
- Measure E3:** By July 2011, the Facilities Management Agency of Public Works will develop and implement a program whereby all new county-owned / managed facilities will meet ASHRE standards. Beginning in July 2012, Facilities Management will provide an annual report that measures progress towards achieving and maintaining the target design rate and identifies overall program results.
- Measure E4:** By July 2010, the Facilities Management Agency of Public Works will develop and implement a program whereby 75% of all new County owned / managed facilities will have a renewable energy resource (solar, wind, or hydrogen fuel cell) as part of the building's design and construction. Beginning in July 2010, Facilities Management will provide an annual report that measures progress towards achieving the renewable energy source target and identifies overall program results.
- Measure E5:** By July 2009, the Facilities Management Agency of Public Works will complete a viability study of using solar panels and fuels cells at County buildings that have the greatest natural gas and electricity usage. If determined to be viable, then by July 2010 Facilities Management will develop a plan that outlines the timeline for installation at such buildings, and provides an annual report that measures progress towards achieving installation and identifies overall program results.
- Measure E6:** By July 2012, the Facilities Management Agency of Public Works will develop and implement a program that uses the 2007 solar study completed by Arrington Watkins Architects to install photovoltaic panels on parking structures. Beginning in July 2011, Facilities Management will

provide an annual report that measures progress towards achieving installation targets and identifies overall program results.

**Measure E7:** By July 2010, the Facilities Management Agency of Public Works will complete study on the feasibility of converting Food factory cooking oil into Bio Diesel. If deemed viable, then by July 2011 Facilities Management will complete a study that identifies a time frame for implementation. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards that goal.

**Measure E8:** By July 2012, the Facilities Management Agency of Public Works will develop and implement a program whereby Facilities Management will do the following:

- Prioritize and fund the following projects and operations using a Board of Supervisors-approved Energy Program budget;
- Commission each new building to ensure that Facilities Management operational needs are met, building systems perform efficiently, and building operators are properly trained;
- Perform energy audits and retro-commission existing buildings;
- Use the Facilities Automation System to provide comfort to building occupants with minimum usage of energy;
- Use high efficiency motor replacements;
- Install variable frequency drive systems for pumps, motors, and chillers;
- Use fuel-efficient landscape maintenance equipment and ban all two-cycle pieces as technology permits transition;
- Use high-efficiency evaporative cooling where applicable;
- Retrofit meters for connectivity through the Internet for improved energy management

Beginning in July 2011, Facilities Management will provide an annual report that measures progress towards achieving and maintaining the noted activities and identifies overall program results.

**Measure E9:** By July 2008, the Facilities Management Agency of Public Works will complete a preliminary study to determine the best delivery method for Downtown cooling to existing buildings and the proposed Court Tower project. Based on study results, by July 2009, Facilities Management will prepare a final study as necessary and provide a report in July 2009 that identifies final results.

**Measure E10:** By July 2011, the Facilities Management Agency of Public Works will develop and implement a program to install in all county-owned/managed buildings 25-W four-foot fluorescent lamps in place of existing 32-W lamps. Beginning in July 2010, Facilities Management will prepare an annual report that measures progress towards achieving and maintaining its installation goal and identifies overall program results.

**Measures E11:** By July 2010, the Facilities Management Agency of Public Works will complete a study that identifies the viability of effectively using solar power for electricity, air conditioning, pressure pump, and water heating at county-owned / managed facilities. If viable, then by July 2011 Facilities Management will complete a study which identifies a time frame for implementation. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards completing the study and identifies program results.

**Measure E12:** By July 2009, the Solid Waste Agency of Public Works Management Department will pursue establishing a solar energy project at Maricopa County Waste Transfer Stations. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining the solar energy project and identifies overall program results.

**Measure E13:** By July 2010, the Transportation Agency of Public Works will develop and implement a program whereby the Transportation Agency of Public Works upgrades all traffic signals to LED (light emitting diode) indications. Beginning in July 2009, the Transportation Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining its upgrade target and identifies overall program results.

**Measure E14:** Maricopa County will develop and implement a program whereby Maricopa County agencies and departments will reduce overall energy use by at least 5% between July 2008 and July 2013. To achieve this target, Maricopa County agencies and departments will, among other actions, employ the following strategies:

- Turn off non-critical electric equipment, including computers and computer monitors, copy machines, and other miscellaneous personal and business equipment after business hours, and unplug or switch off wall adapters/power cubes during non-business hours
- Replace electric equipment with *Energy Star* qualified equipment where possible
- Manually turn off lights and/or use occupancy sensors to turn off lights automatically when not in use
- In county-owned / managed buildings, replace older HVAC systems with higher efficiency units as necessary
- Provide overhead shade of A/C condensers
- Use automatic and/or programmable thermostats to regulate room temperatures where possible.
- Develop staff training and education programs about ways to save energy in their specific work areas and in their buildings.
- Use fluorescent light bulbs instead of incandescent light bulbs in overhead and desk lamps

Beginning in July 2009, each county agency and department will provide

an annual report that measures progress towards achieving and maintaining the target energy savings goals, identifies these and other strategies employed to date and identifies overall program results for their agency.

**Measure E15:** By July 2010, Planning and Development Department will complete an analysis regarding the feasibility of expedited permitting for buildings that meet "Green" building standards. If deemed feasible, by July 2011, Planning and Development will complete a time frame for implementation. Beginning in July 2009, Planning and Development will prepare an annual report that measures progress towards completion of the feasibility study and implementation and identifies overall program results.

**Measure E16:** By July 2010, the Facilities Management Agency of Public Works will prepare a study of the viability of using garden roofs with xeriscape landscaping for County buildings. If determined to be viable, then by July 2011 Facilities Management will prepare a program that outlines the steps, methods, and time frames to establish such projects in both new and existing county buildings.

**Measure E17:** By July 2010, Planning and Development will prepare criteria for Board of Supervisors consideration and adoption that addresses building materials, building surfaces, building design, solar technology, shading, etc. Once approved by the Board of Supervisors, Planning and Development will provide an annual report that measures progress in achieving compliance with the Board-adopted criteria and identifies overall program results.

**Measure E18:** By July 2009, the Facilities Management Agency of Public Works will develop and implement a program whereby 100% of newly constructed facilities owned by Maricopa County will take advantage of new technologies that allow for greater insulation from sound such as Insulating Concrete Forms, installation of double-glazed windows, and use of roof insulation to assist in reducing noise pollution in our facilities. Beginning in July 2009, Facilities Management will prepare an annual report that measures progress towards achieving program goals and identifies overall program results.